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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/660,313   | 09/10/2003  | Satoru Kuramoto      | 5000-5122           | 5412             |
| 27123  | 7590        | 08/17/2004           |                     | EXAMINER         |
| MORGAN & FINNEGAN, L.L.P.<br>3 WORLD FINANCIAL CENTER<br>NEW YORK, NY 10281-2101 |             |                      |                     | TRIEU, THERESA   |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 3748                |                  |

DATE MAILED: 08/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                           |                  |
|------------------------------|---------------------------|------------------|
| <b>Office Action Summary</b> | Application No.           | Applicant(s)     |
|                              | 10/660,313                | KURAMOTO ET AL.  |
|                              | Examiner<br>Theresa Trieu | Art Unit<br>3748 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 9-15 is/are allowed.
- 6) Claim(s) 1-3 and 6-8 is/are rejected.
- 7) Claim(s) 4 and 5 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on September 10, 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 09/10 & 10/17, 2003.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Objections***

1. Claims 6 and 14 are objected to because of the following informalities: on page 15 and 16, line 3, "*the supported pump*" should be changed to -- *the booster pump* --. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claims 1, 3 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Turrell et al. (Turrell) (Patent Number 4,934,908).***

Regarding claims 1 and 3, as shown in Fig. 1, Turrell discloses a vacuum pump comprising:

main pump (20), wherein the main pump has a first housing (40) and a first pump mechanism (32, 34, 36, 38) accommodated in the first housing, the first pump mechanism being of a multi-stage type;

a booster pump (2), wherein the booster pump has a second housing (10) and a second pump mechanism accommodated in the second housing, wherein the booster pump (2)

and the main pump (20) are coupled in series such that gas is sent from the booster pump to the main pump; and

a coupling member (54) for coupling the first housing (40) and the second housing (10) to each other, wherein the coupling member is directly coupled to a portion (30) of the first housing that surrounds last stage of the first pump mechanism such that transmission heat to the portion is permitted (see col. 4, line 39-42); the coupling member being formed separately from the first housing (40).

Regarding claims 6-8, Turrell discloses the coupling member (54) supports one of the main pump (20) and the booster pump (2) such that booster pump is located above the main pump; the coupling member (54) having a communication passage, wherein the communication passage connects a gas exhaust port (not numbered; however, clearly seen in Fig. 1) of the booster pump (2) to a gas suction port (52) of the main pump (20); the gas being a gaseous reaction product generated at a semiconductor machining apparatus.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**3. *Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Turrell '908.***

Turrell discloses the invention as recited above; however, Turrell fails to disclose the coupling member is integrally formed with at least one of the first housing and the second housing. It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the coupling member being integrally formed with a least one of the first and second housings since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

***Allowable Subject Matter***

4. Claims 4 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 9-15 are allowed.

***Prior Art***

The IDS (PTO-1449) filed on September 10, 2003 and October 11, 2003 has been considered. An initialized copy is attached hereto.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of three patents.

Van Atta (Patent Number 2,721,694) discloses a first stage mechanical pump for use in a two stage vacuum pumping system.

Matsuno (Publication Number JP 01-216092) discloses a vacuum pump device.

Shimizu et al. (Publication Number JP 05-231369) discloses a multistage screw vacuum pump.

***Communication***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa Trieu whose telephone number is 703-308-6434. The examiner can normally be reached on Monday-Friday 8:30am- 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E Denion can be reached on 703-308-2623. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TT

  
Theresa Trieu  
Patent Examiner  
Art Unit 3748